

CLAIMS

1. A recording medium in which a plurality of management information are embedded and recorded into data of contents in a plurality of forms of different remaining intensities and at least one of said plurality of management information is the management information whose restriction is severer than those of the other management information.

2. A recording medium according to claim 1, wherein said management information includes at least one kind between copy management information for managing a copying operation of the data of said contents and reproduction management information for managing a reproducing operation of the data of said contents or said recording medium.

3. A recording medium according to claim 1, wherein said management information is embedded in the data of said contents in a form of a strong remaining intensity by which said management information remains even if a signal process is executed to the data of said contents and in a form of a weak remaining intensity by which said management information is erased by executing the signal process to the data of said contents.

4. A recording medium according to claim 3, wherein said form of the strong remaining intensity by which said management information is embedded in the data of said contents is a form such that said management information is spread-spectrum diffused and multiplexed into the data of said contents.

5. A recording medium according to claim 3, wherein said form of the strong remaining intensity by which said management information is embedded in the data of said contents is a form such that said management information is inserted at a first peak or said second peak in a predetermined range of the data of said contents or at a position near said first or second peak.

6. A recording medium according to claim 3, wherein said form of the weak remaining intensity by which said management information is embedded in the data of said contents is a form such that said management information is inserted into lower bits of the data of said contents.

7. A recording medium according to claim 3, wherein said form of the weak remaining intensity by which said management information is embedded in the data of said contents is a form such that said management information is inserted into a high-order coefficient at the time when the data of said contents has been compressed.

8. A recording medium according to claim 3, wherein among said plurality of management information, a managing condition of the management information embedded in the form of the strong remaining intensity by which said management information is embedded in the data of said contents is severer than that of the management information embedded in the form of the weak remaining intensity by which said management information is embedded in the data of said contents.

9. A recording medium according to claim 8, wherein when said management information is copy management information, the management information embedded in the form of the strong remaining intensity by which said management information is embedded in the data of said contents is a managing condition showing "copy is impossible".

10. A recording medium according to claim 8, wherein when said management information is reproduction management information, the management information embedded in the form of the strong remaining intensity by which said management information is embedded in the data of said contents is a managing condition showing "reproduction is impossible".

11. A recording method for a recording medium in which, when data of contents is recorded into the recording medium, a plurality of management information such that a managing condition of at least one of said management information is severer than those of the other management information are embedded and recorded into the data of said contents in a plurality of forms of different remaining intensities.

12. A recording method for the recording medium according to claim 11, wherein said management information includes at least one kind between copy management information for managing a copying operation of the data of said contents and reproduction management information for managing a reproducing operation of the data of said contents or said recording medium.

13. A recording method for the recording medium

according to claim 11, wherein said management information is embedded and recorded in the data of said contents in a form of a strong remaining intensity by which said management information remains even if a signal process is executed to the data of said contents and in a form of a weak remaining intensity by which said management information is erased by executing the signal process to the data of said contents.

14. A recording method for the recording medium according to claim 12, wherein by performing a spread-spectrum process to said management information and multiplexing and recording the resultant management information into the data of said contents, said form of the strong remaining intensity is realized.

15. A recording method for the recording medium according to claim 12, wherein said management information is inserted at a first peak or said second peak in a predetermined range of the data of said contents or at a position near said first or second peak, thereby realizing said form of the strong remaining intensity.

16. A recording method for the recording medium according to claim 12, wherein said management information is inserted into lower bits of the data of said contents, thereby realizing said form of the weak remaining intensity.

17. A recording method for the recording medium according to claim 12, wherein said management information is inserted into a high-order coefficient at the time when

the data of said contents has been compressed, thereby realizing said form of the weak remaining intensity.

18. A recording method for the recording medium according to claim 12, wherein among said plurality of management information, a managing condition of the management information embedded in the form of the strong remaining intensity by which said management information is embedded in the data of said contents is severer than that of the management information embedded in the form of the weak remaining intensity by which said management information is embedded in the data of said contents.

19. A recording method for a recording medium, comprising the steps of:

adding first management information to data of inputted contents;

adding second management information whose remaining intensity is weaker than that of said first management information to the data of said contents to which said first management information has been added; and

performing a signal process for recording to the data of the contents to which said first and second management information have been added, and recording the resultant data into the recording medium.

20. A recording method for the recording medium according to claim 19, wherein a managing condition by said first management information is severer than that by said second management information.

21. A recording method for the recording medium according to claim 20, wherein when each of said first and second management information is copy management information, the managing condition by said first management information is a managing condition showing "copy is impossible".

22. A recording and/or reproducing method for a recording medium, comprising the steps of:

reading out data of contents from the recording medium in which at least first management information and second management information whose remaining intensity is weaker than that of said first management information have been embedded and recorded in the data of said contents, and discriminating whether said second management information has been detected or not; and

when it is determined that said second management information has been detected, a recording and/or reproducing operation is controlled on the basis of the managing condition shown by said second management information.

23. A recording and/or reproducing method for the recording medium according to claim 22, wherein when it is determined that said second management information is not detected, the recording and/or reproducing operation is controlled on the basis of said first management information.

24. A recording and/or reproducing method for the recording medium according to claim 22, wherein the managing

condition by said first management information is severer than that by said second management information.

25. A recording and/or reproducing method for the recording medium according to claim 24, wherein

when each of said first and second management information is copy management information, the managing condition by said first management information is a managing condition showing "copy is impossible", and

when it is determined that said second management information has been detected, the recording operation is controlled on the basis of said second management information, and when it is determined that said second management information is not detected, the recording operation is inhibited on the basis of said first management information.

26. A recording and/or reproducing method for the recording medium according to claim 24, wherein

when each of said first and second management information is reproduction management information, the managing condition by said first management information is a managing condition showing "reproduction is impossible", and

when it is determined that said second management information has been detected, the reproducing operation is controlled on the basis of said second management information, and when it is determined that said second management information is not detected, the reproducing operation is inhibited on the basis of said first management

information.

27. A recording and/or reproducing method for a recording medium, comprising the steps of:

reading out data of contents from the recording medium in which at least first management information and second management information whose remaining intensity is weaker than that of said first management information have been embedded and recorded in the data of said contents, and discriminating whether said first management information has been detected or not;

discriminating whether said second management information has been detected or not; and

when it is determined that said second management information has been detected, controlling a recording and/or reproducing operation on the basis of a managing condition shown by said second management information.

28. A recording and/or reproducing method for the recording medium according to claim 27, wherein when it is determined that said second management information is not detected, the recording and/or reproducing operation is controlled on the basis of said first management information.

29. A recording and/or reproducing method for the recording medium according to claim 27, wherein when it is determined that said first management information is not detected, the recording and/or reproducing operation is controlled on the basis of said second management information.

30. A recording and/or reproducing method according to claim 27, wherein when it is determined that neither said first nor second management information is detected, the recording and/or reproducing operation is controlled on the basis of additional information added to the data of said contents.

31. A recording and/or reproducing method for the recording medium according to claim 27, wherein a managing condition by said first management information is severer than that by said second management information.

32. A recording and/or reproducing method for the recording medium according to claim 31, wherein

when each of said first and second management information is copy management information, the managing condition by said first management information is a managing condition showing "copy is impossible", and

when it is determined that said second management information has been detected, the recording operation is controlled on the basis of said second management information, and when it is determined that said second management information is not detected, the recording operation is inhibited on the basis of said first management information.

33. A recording and/or reproducing method for the recording medium according to claim 32, wherein when said second management information indicates a managing condition which permits a copy of the data of the contents read out from said recording medium, the recording operation

regarding the copy of the data of said contents is controlled on the basis of said second management information, and said second management information which is added to said data of the contents to be copied is rewritten to the managing condition showing "copy is impossible".

34. A recording and/or reproducing method for the recording medium according to claim 31, wherein

when each of said first and second management information is reproduction management information, the managing condition by said first management information is a managing condition showing "reproduction is impossible", and

when it is determined that said second management information has been detected, the reproducing operation is controlled on the basis of said second management information, and when it is determined that said second management information is not detected, the reproducing operation is inhibited on the basis of said first management information.

35. A copy control method of data of contents, comprising the steps of:

discriminating whether second management information has been detected or not from the data of the contents in which at least first management information and the second management information whose remaining intensity is weaker than that of said first management information have been embedded or not; and

when it is determined that said second management information has been detected, controlling a copying operation of the data of said contents on the basis of a managing condition shown by said second management information.

36. A copy control method of the data of the contents according to claim 35, wherein when it is determined that said second management information is not detected, the copying operation of the data of said contents is controlled on the basis of said first management information.

37. A copy control method of the data of the contents according to claim 35, wherein a managing condition by said first management information is severer than that by said second management information.

38. A copy control method of the data of the contents according to claim 35, wherein

when each of said first and second management information is copy management information, the managing condition by said first management information is a managing condition showing "copy is impossible", and

when it is determined that said second management information has been detected, the copying operation of the data of said contents is controlled on the basis of said second management information, and when it is determined that said second management information is not detected, the copying operation of the data of said contents is inhibited on the basis of said first management information.

39. A copy control method of the data of the contents according to claim 38, wherein when said second management information permits the copy of the data of said contents, the copying operation of the data of said contents is permitted on the basis of said second management information, and said second management information which is added to said data of said contents which is copied is rewritten to a managing condition for inhibiting the copy of the data of said contents.

40. A reproducing apparatus of a recording medium, comprising:

a head for reading out data of contents from the recording medium in which at least first management information and second management information whose remaining intensity is weaker than that of said first management information have been embedded and recorded;

a signal processing unit for performing a signal process to the data of said contents read out from said recording medium by said head;

a switching circuit unit to which an output signal from said signal processing unit is supplied;

a detecting circuit for detecting said second management information from the data of said contents read out from said recording medium by said head; and

a discriminating circuit to which a detection result by said detecting circuit is supplied and which controls an on/off operation of said switching circuit unit

on the basis of a managing condition shown by said second management information when the detection result showing that said second management information has been detected by said detecting circuit is supplied.

41. A reproducing apparatus of the recording medium according to claim 40, wherein when it is determined that said second management information is not detected, the on/off operation of said switching circuit unit is controlled on the basis of said first management information.

42. A reproducing apparatus of the recording medium according to claim 40, further comprising a converting unit to which the output signal from said signal processing unit is supplied and which converts said supplied output signal into an analog signal, and wherein said switching circuit unit has a first switching circuit to which the output signal from said signal processing unit is supplied and a second switching circuit to which an output signal from said converting unit is supplied.

43. A reproducing apparatus of the recording medium according to claim 42, wherein when each of said first and second management information is copy management information, on/off operations of said first and second switching circuits are controlled on the basis of a managing condition shown by said second management information, and when said second management information cannot be detected, said first switching circuit is turned off on the basis of said first management information.

44. A reproducing apparatus of the recording medium according to claim 42, wherein when each of said first and second management information is reproduction management information, on/off operations of said first and second switching circuits are controlled on the basis of a managing condition shown by said second management information, and when said second management information cannot be detected, said second switching circuit is turned off on the basis of said first management information.